

A world of change: climate yesterday, today, and tomorrow

Susan Solomon^{C, S}

National Oceanic and Atmospheric Administration (NOAA), Boulder, CO, U.S.A.

Is the Earth's climate changing, and if so, what human activities are contributing to the changes, and what can we expect in the future? In this talk, key evidence for changes in the Earth's climate and the causes of those changes will be summarized. Understanding how temperatures are increasing around the world, how ice is melting at the poles, and how rain is changing in many of the world's dry zones are among the issues that will be addressed. Observations of the greenhouse gases that are the main reasons for these changes will also be presented. The talk will also describe how human choices will combine with the physics of the climate system to determine how different the climate will be by 2050, 2100, and beyond.